

IN THE CLAIMS

1. (currently amended): An isolated polypeptide encoded by a polynucleotide containing at least one human nucleotide sequence selected from the group consisting of:

- (a) a nucleotide sequence which hybridizes to SEQ ID NO:1 under stringent hybridization conditions,
- (b) a nucleotide sequence which is greater than 98% identical to SEQ ID NO:1,
- (c) a nucleotide sequence encoding at least 75 contiguous amino acids of SEQ ID NO:2, and
- (d) a nucleotide sequence complementary to the nucleotide sequence of (a) or (b) or (c);

wherein the nucleotide sequence is at least 50 nucleotides in length.

2. (currently amended): The isolated ~~polynucleotide~~ polypeptide of Claim 1, wherein ~~the nucleotide sequence encodes a~~ said polypeptide with has Hairless transcription factor activity.

3. (currently amended): The isolated ~~polynucleotide~~ polypeptide of Claim 1, wherein the nucleotide sequence is at least 250 contiguous nucleotides of SEQ ID NO:1.

4. (currently amended): The isolated ~~polynucleotide~~ polypeptide of Claim 3, wherein the nucleotide sequence is at least 500 contiguous nucleotides of SEQ ID NO:1.

5. (currently amended): The isolated ~~polynucleotide~~ polypeptide of Claim 1, wherein the nucleotide sequence is SEQ ID NO:1.

6. (currently amended): The isolated ~~polynucleotide~~ polypeptide of Claim 1, wherein ~~the nucleotide sequence encodes~~ comprising at least 100 contiguous amino acids of SEQ ID NO:2.

7. (currently amended): The isolated ~~polynucleotide~~ polypeptide of Claim 6, ~~wherein the nucleotide sequence encodes~~ comprising at least 250 contiguous amino acids of SEQ ID NO:2.

8. (currently amended): The isolated ~~polynucleotide~~ polypeptide of Claim 1, ~~wherein the nucleotide sequence encodes~~ said polypeptide has the sequence of SEQ ID NO:2.

9. (currently amended): The isolated ~~polynucleotide~~ polypeptide of Claim 1, wherein the nucleotide sequence hybridizes to SEQ ID NO:1 at 65°C in a buffer of 500 mM NaHPO₄pH 7.2, 7% SDS, 1% BSA, and 1 mM EDTA.

10. - 19 (cancelled)

20. (currently amended): The polypeptide of Claim ~~49~~ 1 further comprising a heterologous polypeptide domain.

21. (currently amended): The polypeptide of Claim ~~49~~ 1, wherein the polypeptide has transcription factor activity.

22. (currently amended): A method of screening for a chemical agent which modulates Hairless-mediated transcription comprising:

- (a) incubating a candidate chemical agent, ~~a~~ the polypeptide with ~~Hairless transcription factor activity of Claim 1~~, and a reporter construct comprising a transcription regulatory region responsive to Hairless transcription factor operably linked to a reporter gene;
- (b) measuring Hairless-dependent transcription of the reporter gene; and
- (c) identifying the chemical agent which modules Hairless-mediated transcription by a change in transcription of the reporter gene mediated by Hairless transcription factor activity.

23. (cancelled)

24. (original): The method of screening for a chemical agent of Claim 22, wherein transcription of the reporter gene mediated by Hairless transcription factor activity is performed in vitro.

25. (currently amended): A method of screening for a chemical agent which modulates binding between Hairless and thyroid hormone receptor comprising:

- (a) incubating a candidate chemical agent, a the polypeptide with of Claim 1, having Hairless transcription factor activity, and a polypeptide with thyroid hormone receptor activity;
- (b) measuring binding of the polypeptide with Hairless transcription factor activity and the polypeptide with thyroid hormone receptor activity; and
- (c) identifying the chemical agent which modulates modulates binding between Hairless and thyroid hormone receptor by a change binding of the polypeptide with Hairless transcription factor activity and the polypeptide with thyroid hormone receptor activity.

26. (original): The method of screening for a chemical agent of Claim 25, wherein the polypeptide with Hairless transcription factor activity is a fusion polypeptide immobilized on a solid support.

27. (original): The method of screening for a chemical agent of Claim 25, wherein the polypeptide with thyroid hormone receptor activity is a fusion polypeptide immobilized on a solid support.

28. (currently amended): A method of screening for a chemical agent which modulates Hairless activity comprising:

- (a) incubating a candidate chemical agent with a cell comprising ~~a Hairless gene or protein~~ the polypeptide of Claim 1,
- (b) measuring Hairless gene or protein activity, and
- (c) identifying the chemical agent which modulates Hairless activity.

29. (cancelled)

30. (original): The method of screening for a chemical agent of Claim 28, wherein Hairless activity is increased by the identified chemical agent.

31. (original): The method of screening for a chemical agent of Claim 28, wherein Hairless activity is decreased by the identified chemical agent.

32. (cancelled)

33. (original): The method of screening for a chemical agent of Claim 28, wherein the identified chemical agent modulates Hairless protein activity.